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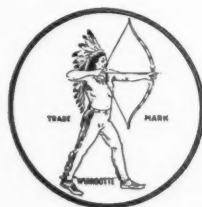
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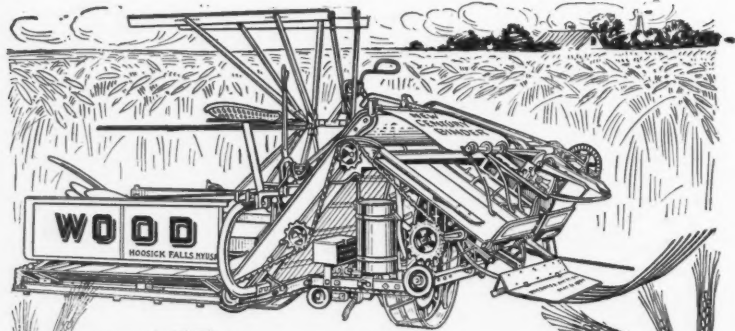


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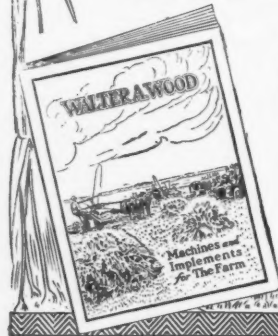
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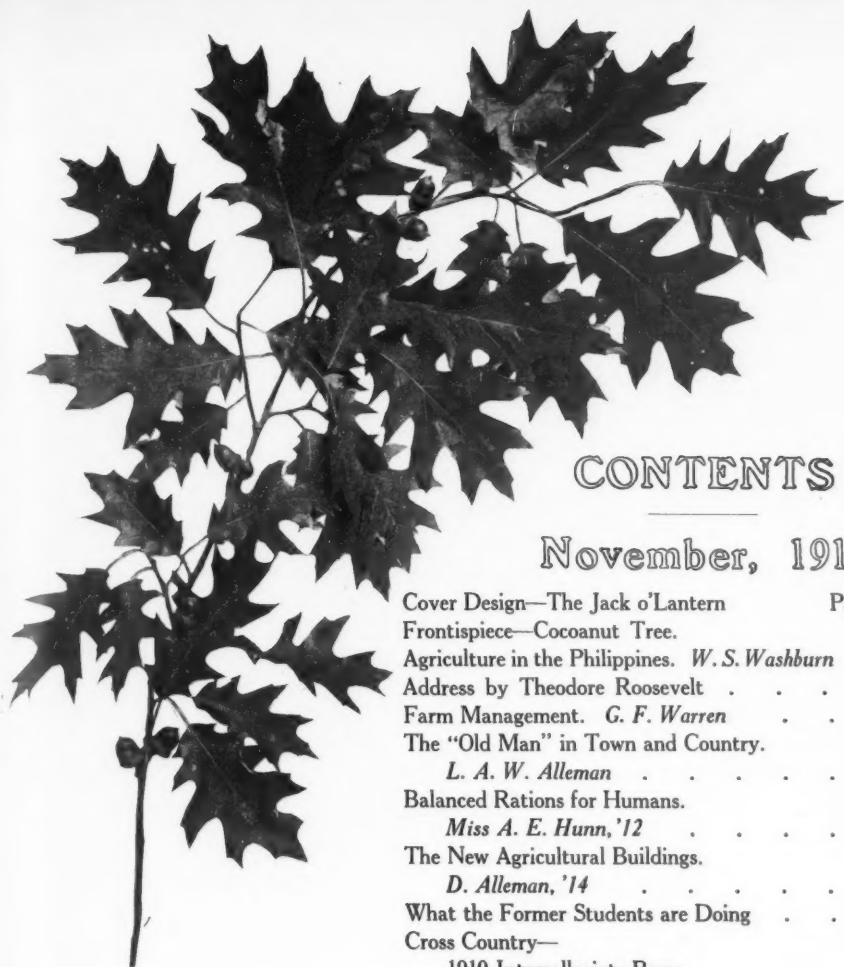
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COCOANUT TREE WITH OVER ONE HUNDRED NUTS—MINDANAO.

The Cornell Countryman

Vol. 9

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No. 2

AGRICULTURE IN THE PHILIPPINES

By William S. Washburn, M. D.

United States Civil Service Commissioner

THE Philippine archipelago, comprises more than a thousand islands with a total area of 115,000 square miles. There are ten others whose areas range from 100 to 1000 square miles.

In the northern portion of the archipelago the rainfall is excessive during a portion of the year and deficient during another period of the year. In the absence of low temperatures the seasons are characterized as wet and dry. The rainfall in the southern portion of the archipelago, however, is quite evenly distributed throughout the year. Artificial water supply through irrigation systems would materially increase the agricultural output in some of the islands. Although warm and moist, the climate is not unhealthful, and persons who observe the laws of hygiene enjoy as good health in the Philippines as do people living in most parts of the United States.

A somewhat detailed description of the character and production of the principal staples of the Philippines may be of interest.

The natural resources of the Philippines, of which the chief is agriculture, are comparatively undeveloped. Probably one-third of the area of the Philippines is available for cultivation; yet not one-tenth has ever been utilized. The agricultural implements and methods employed by the Filipinos when our Government took possession of the islands were crude in the extreme.

Little or no modern machinery was ever introduced during the Spanish regime and little was done in modern times by the Spanish Government toward developing the abundant agricultural resources of the islands.

Wherever the Filipino tickles the soil with the small, steel-pointed, single handled wooden plow, the warm earth smilingly responds with great crops of tobacco, sugar, and rice; but it takes several days with the slow-going carabao to scratch an acre. After about the third scratching, seed is planted. Every subsequent process is equally antiquated and slow and wanting in economy of time and product.

As in other parts of the Orient, rice is the most important article of food. In the tropics it takes the place of wheat. The rich, well-watered lands of the Philippines are well adapted to its production. After the ground is scratched with the same stick of a plow, the paddy fields are flooded and harrowed under water to a soft, muddy consistency, the wallowing carabao, or water buffalo, being here in his native element.

In the soft mud the young rice shoots are transplanted by hand, the natives, in this case usually women, standing ankle deep and thrusting each individual rice stalk into the depths of the mushy soil. The paddy fields are kept flooded until the rice begins to head. When the crop is ripe, men, women, and children are in the field



OPENING COCOANUTS FOR COPRA, SAN RAMON FARM.

from early morning until the evening shadows fall, cutting with small knives each stalk separately and gathering them into sheaves of *palay*, or unthrashed rice. After the grain is separated from the straw by hoof or flail, it is winnowed by the soft breezes of the tropics as it falls from the bamboo basket held aloft usually by women, who stand thus engaged for hours under a sun-sheltering bamboo canopy. By one more process the milk-white rice is separated from the hull by the use of a wooden dumbbell pounder in the hands usually of a woman member of the family. Thus, after many days of toiling and waiting, does the Filipino obtain this staff of life, this palatable, healthful food, eaten three times a day by natives and almost as often throughout the Orient by European residents.

The cocoanut palm is an important source of revenue in the Philippines, furnishing, as it does, one-third of the world's supply of cocoanut oil. After the young trees are well started they require little care. Young shoots from

the growth of seed nuts which are allowed to lie in shaded places for a few months may be transplanted, fifty or one hundred to the acre, and the ground utilized and kept clear of weeds and grass by the cultivation of corn or such leguminous plants as peas and beans. Trees begin to bear when about seven years of age, and come to full maturity two or three years later, with an average annual yield of sixty nuts to the tree during its life, which ranges from fifty to one hundred years.

While new and varied uses of cocoanut oil have stimulated production, the market value is steadily increasing. As no other vegetable oil or substitute has been brought forward to take its place, the copra industry bids fair to maintain a leading place in the agricultural productivity of the islands, where its export value is ten million dollars annually, or nearly one-fourth of the total exports of the islands.

The waterways furnish means of transportation whereby the unhusked nuts are brought to Manila or other

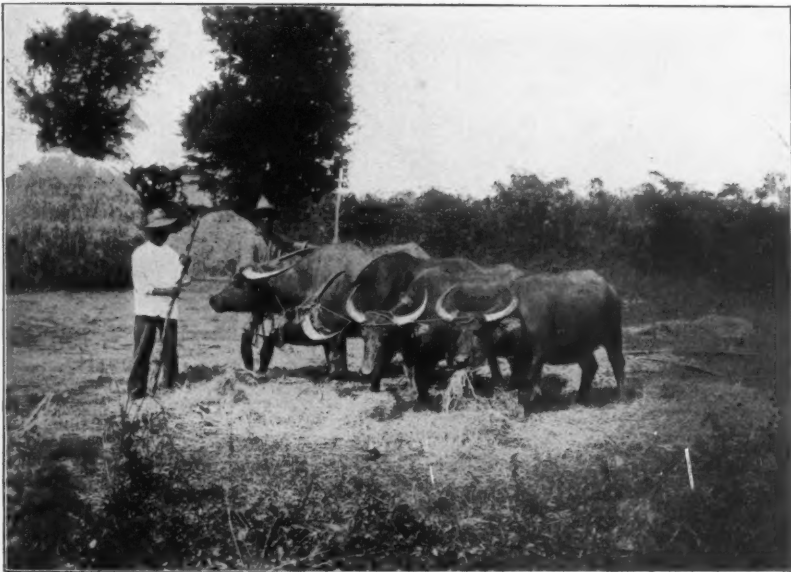
Philippine centers of trade on huge rafts or in large open boats called *cascoes*.

Cocoanut oil, pressed from the meat or fruit, is commonly used in the Philippines as an illuminant and as a substitute for butter and lard. Copra, the dried meat of the nut, is exported principally to the oil factories in France, where it is used in making edible oils and soaps. The fiber or husk of the cocoanut is used for *coir*, for caulking boats, and other purposes.

The making of alcohol and alcoholic beverages, such as *tuba*, or palm wine, the sap of the cocoanut palms, is an industry quite commonly pursued for local consumption, and there are provinces where it ranks as the most important industry. Early in the morning the *tao*, a name given to the laboring class, may be seen climbing the tall trees monkey-fashion, emptying the bamboo vessels, suspended over night under the cut flower-stems, into a larger vessel hanging on his back. The product is taken to a distillery, where it is converted into alcohol. In

the early morning the *tuba* is a refreshing drink, much like fresh apple cider, but as the day advances it ferments rapidly. No less agreeable and refreshing to the weary traveler is the cool water or "milk" of the cocoanut.

The method of sugar cane culture in the Philippines is antiquated, as is also the production of sugar from the cane. The mills provided on the best sugar estates lose about one-half of the possible values of the sugar cane, whereas with modern machinery, such as is used in the Hawaiian islands, for example, 96% or 97% of the saccharine substance of the cane is secured. In some parts of the islands the syrup from the boiling pans is poured into large porous earthen pots, holding about 150 pounds each, and allowed to drain. After the molasses is drained off, the soft raw sugar is cut into cakes and laid out on flagstones for sun-drying before it can be shipped. There are no sugar refineries worthy of the name in the Philippines. A few of the most prosperous owners of sugar estates are introducing modern meth-



THRESHING RICE BY MAKING CARABAOS TRAMPLE OVER IT, BULACAN PROVINCE.

ods in this industry. The investment of foreign capital would revolutionize the sugar industry of the islands.

The most notable product of the Philippine islands, one which is nowhere equalled and is in demand in all parts of the civilized world, is Manila hemp, from which the best rope is made. The exportation during the fiscal year ended June 30, 1910, amounted to 170,788,629 kilos, of the value of \$17,404,922. Manila hemp (abacá) is the fiber of a wild plantain so similar in appearance to a banana plant that they are not ordinarily distinguishable. The fiber is contained in the leaf-stem of the plant.

To extract the fiber the Filipino has been accustomed for generations to use a simple device by which the leaf-stem is drawn between a block of wood and a knife hinged to the block and provided with a lever and treadle so that it can be firmly held down on the stem. The pulp is thus scraped from the stem, after which the fiber is spread in the sun, where it is dried in a few hours and is ready for baling. As only about

twenty-five pounds of fiber can be thus produced by a man in a day and thirty per cent. of the fiber is wasted, this ancient method of extraction is being superseded by hemp-stripping machines invented by Americans.

In the southern part of Luzon and in several of the central islands where abacá is the chief product, cloths are woven of this fiber not only for home use but also for the markets of Manila, Iloilo, and Cebu. This is the *sinamai* worn quite commonly as waists for the women and shirts for the men in all portions of the Philippines. It may not be commonly known that among the most expensive and durable hats worn by women in this country are those manufactured from Manila hemp. It is, of course, well known that it furnishes the best material for the manufacture of rope which the world produces.

It may be of interest to note that on the island of Panay, and especially in and about Iloilo, the choicer, though less serviceable fabrics are principally produced, especially the *justi*, a blend of vegetable fiber and Chinese silk.



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HUGE WATER WHEEL MADE OF BAMBOO, USED TO LIFT WATER FOR IRRIGATION.

The *jusi* cloth has in large part replaced in favor the once more famous *pina*, or pineapple-fiber cloth.

Individual American enterprise and energy are illustrated in the occupation of territory about the gulf of Davao in the island of Mindanao, where more than a hundred Americans have hewed their way to success through the dense forests of that region. Already they have planted more than two million hills of hemp besides numberless cocoanut trees. The investment there of capital and labor has been large, and returns are now coming in, not less than one-quarter of a million dollars from the sale of hemp alone being realized last year.

Of other important products, to the production of which on a large scale the climate and soil of the Philippines are well adapted, coffee, cacao, and rubber deserve special mention. There has been too little attention given to the production of these staples, although it has been amply demonstrated

that conditions are most favorable to their culture.

From time immemorial the small cultivators of land in the Philippines have been dependent on the large proprietors for advances of money or food and seed, if not both, during the cropless season. One of the chief reasons for the dependence of the masses upon the *caciques*, or social and political masters, is the evil of gambling the principal vice of the Filipinos, the favorite form of which consists in cockfighting, which they follow with a passion that astonishes foreigners. With changing conditions under American administration, it is expected that this evil will gradually wane and disappear. Under the more favorable conditions of American occupation, agricultural productivity should be greatly increased and a degree of prosperity perhaps unequalled elsewhere should prevail in these tropical islands, which nature has so richly endowed.

ADDRESS BY EX-PRESIDENT ROOSEVELT

(Delivered before the students of the New York State College of Agriculture, November 3rd, 1911)

STUDENTS: This institution, the college of agriculture of Cornell University, is one of the institutions of the country which is at the present time doing the most vital educational work in our country. I did not know of the chance I would have to speak to you this morning, because I am not making speeches, and in that connection I recall the saying of the old New Bedford captain who said to his mate, "what I want from you, sir, is silence, and dom little of that." However, I could not refuse Dean Bailey's request, because I so often make demands upon his time and his best efforts. His service, so ungrudgingly rendered, has been of inestimable value, consequently, I did not consider myself at liberty to refuse.

I came, because, thanks to Dean Bailey, this particular college of agriculture with its aggregate enrollment, including the winter course students, of 1500 students and with its professorial and teaching faculty of about one hundred men, because, without injustice to any other institution this college is the foremost institution of its kind, the most useful institution of its kind, not only in the United States, but in the whole civilized world.

Turning so that he faced Dean Bailey, he said:

Dean Bailey, it is none of my affairs, but I should regard it as a calamity, not only to the state, but to the nation, if you do not continue to do your work at the head of this college.

Some people say that I did, when I was president, many unconstitutional things—Dean Bailey was one of these unconstitutional things. Congress said it was a usurpation of power on my part to appoint him and his colleagues on that committee, and that sensitive body refused to publish the committee's report. The Spokane Chamber of Commerce, however, not being quite so sensitive,

published the report; and that report called attention to certain vital needs which were thoroughly appreciated by a few farsighted people of the nation. Of course, whenever the needs of a great nation are placed before the public, there is always a certain number of people,—good people but perhaps not very advanced people, who think it is unpatriotic to make a diagnosis of such things. Some of these would insist that there is nothing to remedy or if there is, that we are incompetent to remedy it.

Our hope of making the country life as important and helpful a part of the general national life as it should be, rests with the men and women of the future, who have done the kind of work you are doing, and have been given the kind of training that you are getting here now.

I wish to say a word of especial interest to the young men and more especially to the young women. The very best product of the farm is its product of men and women. If you do not have the right kind of men and women, all effort to improve agricultural conditions will amount to nothing. As the women comprise at least 50 per cent of the population, they have to do 50 per cent of the work of improvement. This improvement is to come from within, as well as without, the farmhouse. Dean Bailey has done no greater service to the cause he has championed, than by his insistence that while actual agricultural work is of the utmost importance, yet based on that as a foundation, there should be collective (or community) work.

As long as you are trying to develop merely agricultural practices on the farm for your only work, you are building, not houses, but merely the foundation for houses. While that foundation is indispensable, it is utterly useless if you do not also build the superstructure of the higher community life. Work for a high social

intellectual, and spiritual life in the country. The school-house, the Church, and all social associations of every kind must do their part in bringing up the standard of country life; and, ladies and gentlemen, in any work you are doing as in every form of political work, remember that it is useless to try to reproduce vanished conditions. Those conditions may have been excellent but they belong to the past. You cannot re-introduce them. If you merely copy them, you introduce the body with the soul out of it. The conditions of rural America under which everything can be done by a few individuals have vanished, never to return.

In the same way, we cannot get back to farm life of the middle, or early part of the 19th century. You will fail completely if you attempt to do that. What you will have to do, is to face the new conditions that necessarily mean increased urban development, and try to shape them so that it should not take place at the expense of the country, but should go on hand in hand with the development of the country. The extraordinary growth in the mastery of men over the forces of nature, and in perfecting mechanical appliances for the past century has rendered it inevitable that a much smaller percentage of people are now making their living on the soil than was the case a century ago. We cannot by anything we may do, restore the percentages of those living under rural and those living under urban conditions to those of a century ago. What we can do is to try to make the development of the country go hand in hand with the development of the city and while developing as strong a power of initiative as possible to see that there also goes with that individual initiative, the same power of well directed community effort, which has been so great a factor in the development of the cities. Nothing will take the place of this individual character. For the average man and the average woman

on the farms, if they have not got the right stuff in them, no education will get it out because it is not there to get out. Individual character by itself cannot solve the existing problems, cannot meet the existing conditions. There must be direct community effort.

While education offers a man a foundation for his life, a foundation for his material success, yet it is only the foundation upon which the higher superstructure should be built. We cannot have any proper social life, any proper intellectual life in the country until we have a foundation of material efficiency, of material success and well being, or we never will have the right type of man and woman living in the country. If the improvement in country conditions means nothing but growing bigger crops and when these have been grown, moving off to the city, it is a failure.

This college here at Cornell has done much in leadership for other institutions, because it has recognized the many-sided nature of our national agricultural problem; because, while it insists that the first work to be done is to increase the actual products of the farm, yet it emphasizes that this is only the first work, and that it is equally essential while getting the country on a proper material basis, to see to it that every institution in the country that stimulates to higher ideals—intellectual, moral and spiritual, be developed to meet the increased social demands upon it, just as is the case in the city. It is of fundamental importance to take care of the crops, and after you have taken care of them, remember, that unless you can do a great deal more than teach how to take care of the crops, you will have come far short of your duty because you have failed to recognize that the all important problem in the country is the human problem; the problem of getting the right kind of men and women; the problem of developing men and women so as to make them, in the fullest sense, responsible American citizens.

FARM MANAGEMENT

By G. F. Warren

Professor of Farm Management, Cornell University

THE BEGINNINGS OF FARM MANAGEMENT TEACHING

ONE of the latest subjects to be added to the courses in the agricultural colleges is that of farm management. So recent, in fact, that it is not yet represented in the majority of the colleges. In 1908, the writer secured statements from all the agricultural colleges as to any work that they were doing that included farm management. Only two agricultural colleges were then giving definite courses in the subject. Three others included some farm management work in other courses. To Professor Hunt must be given the credit for the beginning in this teaching. In four of the five institutions, the work was being taught by persons who had studied with him. In reply to requests for an exhibit of work for the graduate school, some amusing collections were received. Several states sent work on fertilizer tests; some on soil physics. But the work of the five institutions mentioned above was so suggestive that many persons went away with the idea of starting farm management teaching. In this graduate school, farm management was represented for the first time with lectures by Professor Spillman and the writer. The relation of farm management to other subjects was also discussed. These discussions were incorporated in the *Cyclopedia of Agriculture*.

At the last graduate school in 1910, the subject received a little more time, but the authorities of the school did not allow it full time as they did to agronomy, poultry, etc. However, the interest aroused by the discussions was so great that the subject will probably be fully recognized hereafter. At this meeting, the American Farm Management Association was organized. The second meeting of this association will be held at Columbus, Ohio, Nov. 15th.

At the graduate school at Ames, an exhibit of farm management work was made by most of the schools teaching the subject. There were about a dozen that were then doing more or less work. Now about twenty institutions are doing some work; about a half dozen are pushing the work vigorously.

WHAT IS FARM MANAGEMENT?

At the present time, there is no more important subject before the agricultural colleges than the organization of farm management work. The first step is the proper definition of the subject.

Being a new subject, the field of farm management is not always clearly understood. It has sometimes been confused with animal husbandry, horticulture, farm crops, or rural economy. It may be taught by persons who also teach these or other subjects, just as horticulture and dairy industry are sometimes taught by one man; but the distinction between the subjects should be none the less clear. The teacher of farm management finds that his work is much more closely related to animal husbandry, farm crops, and horticulture than it is to rural economy. One of the important subjects in farm management is the selection and purchase of a farm. This bears the same relation to rural economy as does the selection and purchase of a cow. It is the aim of farm management teaching to unite business principles with the scientific principles taught by the various departments into such a system that the farm as a whole shall yield the greatest profit. The rural economist must somehow tie all the farms together into a philosophy of progressive civilization.

The student of architecture is taught art by one man, drawing by another, sanitation by another, strength of materials by another; but he would

be a poor architect whose training stopped with these fundamentals. Finally, the student is required to make plans for buildings in order that he may have practice in applying the principles and in making estimates of cost. Similarly the student of farm management selects specific farms and makes plans for their arrangement, equipment, and management, with financial estimates. If a student has had practice in making such estimates for a dairy farm, he will have the method of attack in making plans for an orange plantation. One who has studied this subject ought to be fairly well prepared to go on to a farm and decide as to the type of farming to take up, field and building arrangement, cropping system, number of each kind of animals to stock the place, equipment required, capital necessary, the amount of labor required, the kinds of accounts and records to keep, etc.

"How shall I grow corn?" is purely an agronomy question, but "Shall I grow corn or some other crop?" and having grown it "Shall I feed it or sell it?" are purely farm management questions.

"What sort of a contract shall I make with my landlord?" is a farm management question, but the effect of tenancy on the welfare of the county is a subject for the rural economist. In our farm management investigations in New York, we have found the shortage of capital to be the most serious obstacle in the way of successful farming. The whole tendency of our banking system seems to be to drain the county of its deposits and direct them to the cities. At any rate, there are few bankers who know enough about the values of farm land to be able to make farm loans carefully. Not knowing, they lend on the acre basis rather than on farm values. Farmers find it very difficult to get money to hold crops. Not infrequently a farmer who has several thousand dollars of harvested crops finds it impossible to get a bank to loan him a few hundred on his note. Machinery is purchased on time at prices so much above cash prices that

together with the interest rate, it frequently amounts to a real interest of ten per cent. Here we turn this question over to the rural economist with the request that he make a full study of the whole question of agricultural credit, for this properly belongs in his field.

WHY THIS SUBJECT IS NECESSARY.

When all the work of the agricultural college was taught by one man, there was little need for a separate course in farm management. Any ideas on this subject that such a teacher had were woven in with his teaching. Professor Roberts included much of the business principles of farm organization in his courses.

With the multiplication of departments in the Colleges of Agriculture, students are in danger of developing wrong ideas as to the relative importance of different factors in the management of the farm as a unit. The student who becomes an enthusiast on poultry may forget that successful crops must be raised if the farm is to prosper. The one who believes that alfalfa will make any farm pay may neglect to provide profitable animals to eat the crop. It is desirable, therefore, that the student correlate what he has learned in all the departments by applying it to the management of specific farms.

Scientific farming is not the buying of spray-pumps and milking machines, nor the spending of a lot of money that one does not have, although all of these things may be desirable at times. It is not farm mechanics or horticulture; it is not animal husbandry or farm crops. He who farms successfully must consider the farm as the unit.

Just now we hear much about what great crops are raised in Europe and how foolish our farmers are that they do not till every inch of earth and raise the maximum crop of the most intensive kind. First of all, a farm must pay. A state supported institution may raise maximum crops and do various other "stunts," but a farmer must make his farm pay. So long ago as the

days of Pliny this was ancient knowledge. He says: "I may possibly appear guilty of some degree of rashness in making mention of a maxim of the ancients which will very probably be looked upon as quite incredible, 'that nothing is so disadvantageous as to cultivate land in the highest style of perfection'."

Lately we seem to have forgotten that the farmer must make the farm pay. In our survey work, we have found that the most profitable farms were raising good crops, usually quite a little above the average, but not fancy crops. Enthusiasm is a good thing but it is well to temper it with business sense unless your father made the money for you to spend.

Perhaps the most important service of farm management teaching is in aiding farmers to decide between various things, all of which pay. The farmer is usually so short of capital that his problem is not what would pay but what to do with his little money. He may know that his land needs drainage, that he ought to keep better stock, buy more fertilizer, use lime, sow alfalfa and may be sure that each of these will pay well. If he asked in a specialist he would likely be advised to improve in that particular line. His problem is to decide between the various possibilities and pick the best.

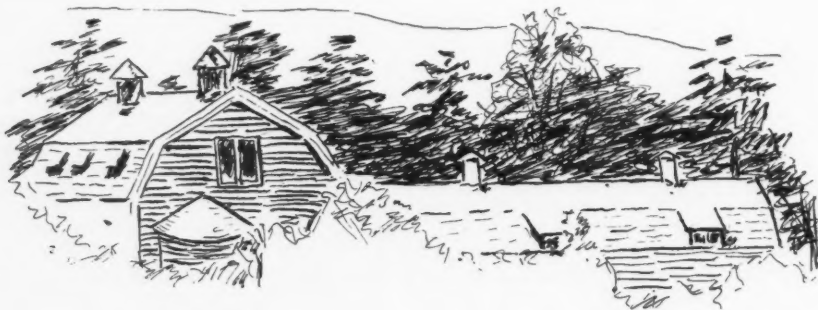
**FARM MANAGEMENT TEACHING MUST
BE UNPREJUDICED.**

Since the teacher of farm management should be unprejudiced, it is very

desirable that the subject be separate from any other department so soon as funds permit. If taught by a professor of agronomy or animal husbandry, such a teacher should understand that farm management is not crop farm management or animal farm management but a general subject. The tendency of all departments is to make a good showing for their special work. Some colleges are developing the subject in several departments, as dairy farm management, crop farm management, etc. It is not likely that this will result in good farm management teaching.

The most profitable dairy farms are those that also raise cash crops or other products. The teacher of dairy farm management is quite certain to over emphasize the importance of the dairy cow even if he does not go so far as to dream on how to keep the greatest number of cows per acre of land—as if man's mission were to populate the earth with cows. Profits are not measured by cows per acre. So a teacher of any specialty, if he be a live man, is almost certain to over emphasize his specialty.

For four years we have been hoping to have farm management in a separate department at Cornell. This year the hope has been realized. Cornell was the first institution to have a professor of farm management, but Missouri was the first to separate this department from all other work. Cornell is the second institution to establish the subject in an independent department.



THE "OLD MAN" IN TOWN AND COUNTRY

By *L. A. W. Alleman, M. A., M. D.*

Geneva, N. Y.

SHOULD I have a break in my fence, I prefer to discover it myself, rather than have it pointed out to me by a neighbor, and it seems fitting that a farmer should bring up for discussion a disagreeable fact that sounds a discordant note in the chorus of glorification of country life, now in vogue.

None know better the many advantages of a life in the country than those of us who are so fortunate as to enjoy them. But there is no environment, no business or profession which does not have another side. The sun does not always shine in the country, and we farmers have troubles of our own which are unavoidable, and which we must accept with the best grace we can; but there are other and avoidable evils which should not be ignored, but rather harped upon till the reader, wearied by much iteration, stops and thinks; then if our diagnosis and prescription be correct, improvement will soon follow.

The particular matter that I have in mind is this: at fifty, the average farmer, as I see him, is, in appearance at least, an old man, while his city brother is in full mental and physical vigor employing his mature judgment and experience in the profitable prosecution of his business enterprises. To any such general statement there are, of course, many exceptions, but I appeal for confirmation to any country bred man who will call to mind the men who were his comrades in the district school a quarter of a century ago. This is not as it should be and is contrary to all theory and reason. A life in the open, fresh air and sunshine, the beautiful surroundings, the quiet, the wholesome food, all these should make a man well and happy.

Why is it that with the ideal hygienic surroundings, with the independence which is the producer's prerogative, with a healthful occupation, the farmer becomes senile much sooner than the man of the same stock who has been transplanted to the city and

has spent his life in the nerve-racking stress and turmoil of urban life.

Let us consider some of the possible causes of this anomaly. Hard physical labor and exposure? I am familiar with nearly all kinds of work on a general farm and I do not believe that a man of normal physical development, in good health, is ever injuriously affected by necessary farm work. Even in the busy season, a normal man should be fully recuperated after a night's rest, and considering the drain upon the nervous system, farm work is less exhausting than business or professional life. Again, were hard physical labor the cause of the farmers' early senility, the shiftless and lazy, the man who prefers the rod and gun to the plow, should shine in marked contrast to his hard working neighbor. But he does not, if anything he is more nearly the typical "Uncle Ruben" of the cartoonist.

Lack of congenial companionship? Again, the man who neglects his work to foregather with his kind at the village store or the shop while he may be "one of the boys," does not show any visible signs of his juvenile attributes.

Alcoholic intemperance? Emphatically no—I know of no class of men more generally sober and moral than farmers.

Lack of nourishing food? I know of no section of our land where the farmer lacks for food, containing a sufficient quantity of nutritive units to satisfy the requirement of a most liberal dietary. Yet I believe that as a class, farmers are suffering from malnutrition. I think I am correct in stating that in the Civil War the crack city regiments, composed of men who were unaccustomed to hard physical work, withstood the severe strain and the terrible privations to which the troops were subjected, better than those from the rural districts, and the explanation given by army surgeons was, that their nutrition was superior. Why? I do

not speak as an authority on this subject, but suggest the explanation that occurs to me, hoping to elicit discussion and remedial suggestions. I believe that monotony in diet, improper preparation of food, manner of eating, dental disorders, preventing proper mastication, overactivity directly after eating; in short, dietetic intemperance, is the crying evil in country life today.

While the farm should furnish a sufficient variety of food at all seasons, as a matter of fact the farm diet is a very restricted one. It is exceptional to find a good garden on the farm. A few summer vegetables may be grown but there is seldom any great variety. I am not contending that a garden is profitable; in most cases I think that winter vegetables can be bought from someone that grows them on a large scale more cheaply than they can be grown, but if they are not grown at home they will not be on the table. Either from false economy or from that indifference to domestic needs which is too common on the farm, the wife has to provide for the family with what she can find, and she certainly has no time to tend garden. Frequently the farm is far from a market and fresh meat can be secured only at irregular intervals, so it happens that "pork and taters" are served with deadly regularity. Even with this limitation of materials much could be done by skillful preparation, to improve the wholesomeness of the farm dietary, but, while I regret to say it, I believe the average farmer's wife is from a hygienic standpoint, not the best of cooks. There are very many reasons why this is true. As I have said, she is discouraged by the indifference of the man to her needs. When she has chopped the wood and drawn the water, often literally drawn it, because the pump won't work, and has attended to the thousand and one things required of her, she has but a limited time for the preparation of meals, and frequently she takes little interest in the matter. For this the attitude of the man is often to blame; he assumes that it is her job to feed

him, and it never occurs to him to acknowledge her efforts by a word of commendation. Often ignorant of the first principles of cookery, her one weapon in the war with hunger is the frying pan.

Some kinds of food may be properly prepared by frying—but there is frying and frying. The fried food I am deploring, is the grease-soaked, toughened product of a cold spider and a slow fire. It is a dietetic crime. But it is unnecessary to dwell upon such a painful subject. You have all at some fateful moment in your lives been exposed to such a meal and the memory will remain with you always.

To the ill-prepared meal the farmer comes, always in a hurry. No matter how slow on other occasions, he is a busy man at meal times, and if delayed a moment is in ill humor. He seats himself at the table and dispatches the business in hand with an expedition, which, if continued throughout his day, would make him a wonder in the working world. No attempt is made at mastication, and when the food will not go down fast enough, it is assisted by copious draughts of some fluid. No word is spoken, he looks only from his plate to the possibilities on the table, and in sputtering gasps between bites, asks for what is beyond reach.

This manner of eating is not justified by any legitimate demands of farm work; there is the same mad rush to finish the meal when one pushes back from the table, loaded to satiety, to sit and stare into vacancy; but however indifferent to the demands of work at other times, it is the rule to "get busy" after a meal, even if work is stopped an hour later for a leisurely chat with a neighbor.

It is the usual practice to eat the heartiest meal of the day at noon, and to resume work at once with no interval for digestion. It requires no great knowledge of the physiology of digestion, to predict the results that must follow from such flagrant violations of the laws of hygiene. The human digestive process is not comparable to a feed mill in which grain is mechanically

ground or crushed; nor to a chemist's jar in which food is subjected to the action of the digestive ferments. As in all vital processes, we must take into account the action of the nervous system, and the influence of one part of the body upon the others. The process of mastication, mechanically breaks up the food into small particles, to facilitate the actions of the digestive fluids, while this is being done, the food is mixed with saliva, which performs an important part in preparing it for absorption and the chewing, the swallowing and the smell of food, combine to send through the nerves, a message to the stomach that there is business at hand and that it should begin preparing to digest the coming food, the blood supply to the digestive organs is increased, and they are ready for their task. But when food is bolted, the unchewed masses are thrown into the unprepared stomach, and surprised and overwhelmed, it often "goes on strike."

It is self evident that when food is improperly cooked and imperfectly masticated, it will be improperly digested. The loss of the nutrition contained in the undigested food is of little moment, but it is important that these undigested masses act as irritants in their progress through the body, and intestinal disorders are produced. When the intestinal tract is deranged, there are formed many poisonous substances which are absorbed into the system, giving rise, according to the kind and quantity, to what is known as ptomain poisoning or to the lassitude and depression of the chronic dyspeptic. In this condition of self poisoning, while sufficient food is taken into the system, it is not prepared for absorption, and starvation in the midst of plenty results. One common symptom of these digestive troubles is an unnatural craving for food, which leads to still further intemperance in eating, and the victim of the eating habit goes on from bad to worse. But you will ask, "Why is it, that we so frequently find the farmer living to extreme old

age?" It is, I think, because in a certain degree the disease tends to remedy itself. After a time the abused digestive system "goes on strike," and the victim, if he does not die of acute indigestion, partially reforms. There are few more eloquent temperance lectures than an attack of acute indigestion. He learns that every indulgence is followed by a penalty, and his "dispepsy" makes him wondrous cautious; the diet is made a little more rational, and thanks to his environment, the farmer "enjoys poor health" for many years.

There is also, I believe, a psychic side to this old age question. Who is there who will not cut off a year or two from his apparent age if he is well dressed? He "walks up" to the new hat and gloves, as he goes down the street, and if he sees an old friend coming he carries himself so that he loses a year or two more. Now I suspect that the farmer looks to us much older than his tissues would look under the microscope. The stooping shoulders, the shuffling gait, add many years to his appearance. The indifference to looks and the bad carriage, are only matters of habit. The city man, on the other hand, is always on inspection and is constantly stimulated to look his best, lest he excite ridicule, which he dreads more than envy, hatred, malice and all uncharitableness.

From the moment the country boy goes to the city, to the day he dies in harness, he is constantly obliged to look and to be alert. The gong of the electric car or ambulance is a powerful awakener, and the "slow one" in business or on the street is soon run down.

The term, "old man," in town and country, does not convey the same idea. When a boy enters a city office he soon learns that the personage who sits behind the door marked, "Private Office," and known as the "old man," is the one and only thing that matters. He is the "whole thing" to that boy's mind; and if he has dreams of ambition, they all have to do with the day when he will be the "old man." When, in the fullness of time, he gets

there; when he is "the old man," it reacts on him, he has a position to live up to. No matter what his age—he is the vital inspiring force of that business; he may suffer no loss of acuity, or he must give place to a successor so he keeps young and active.

On the other hand, when the "old man" on the farm can no longer pitch as many loads of hay in a day as the boys, he feels that he is a back number. In other words, the standard of efficiency in city life is mental; in country life, physical. Let us rather say was—for I am fully convinced that a new era has dawned in agricultural

work. Today, farming is no longer the proposition of a laborer, but of a thinking worker. The man who can merely plow or pitch or dig is no farmer, he can at most only earn a laborer's wages. The time has come when we must have an "old man" on the farm, a man who thinks, plans, directs. Let him work hard with his hands if he will, but he must work with his head first and the material result of his thinking will be the means to surround himself with all necessary physical comforts and sufficient leisure in which to recreate himself and to learn how better to be the "old man" on the farm.

BALANCED RATIONS FOR HUMANS

By Miss Anna E. Hunn, '12

ACTIVITY, size and age are the chief factors which determine the food requirements of our bodies. The present consideration shall be in what form and proportions we should eat foodstuffs in order to meet the needs of the body, or in other words, what formula shall be given for a balanced ration for human beings.

If we know of what elements the body is composed, we can soon figure what we must supply to keep it in repair. Chemistry has informed us that the following elements are always found in the body in measurable quantities and that they are probably essential to it; carbon, hydrogen, oxygen, nitrogen, sulphur, magnesium, sodium, iron, chlorine, calcium, potassium and phosphorus. These twelve elements are constantly needed in our food. The protein which we eat furnishes the carbon, hydrogen, oxygen, nitrogen and sulphur; fats and carbohydrates furnish carbons, hydrogen and oxygen; and the vegetables and fruits, furnish the mineral matter.

Protein forms a good starting point when figuring a balanced ration, because it is the hardest for which to set a standard in the problem of amount in the diet. Work does not materially increase the need for protein, so if we once determine the amount of protein we need, we have settled the question

for some time. Furthermore, the body cannot store up protein, as it can fat, so there is no need of eating more than the body requires to keep itself in good condition. Some men, as Chittenden, believe that the amount of protein in the diet should be low while others, as Atwater, take the opposite side.

Chittenden claims that only enough protein should be eaten to balance the intake and output of nitrogen. If this nitrogen equilibrium, as he calls it, is established there will be no wasting away of the body and no need of extra protein. He further says that the waste products from large amounts of protein are irritating to the tissues of our bodies.

Those favoring a large supply of protein, argue that in the history of nations we find that the strongest peoples are those who have had a liberal protein diet and that a protein diet makes the body less susceptible to disease.

Chittenden would furnish one-twelfth of the total food calories in forms of protein; Atwater would furnish one-seventh in forms of protein.

Since there is such a difference of opinion, it is now considered best to take a middle course, and plan a dietary moderately rich in protein. We must choose our own course in deciding which standard to follow, but in all

probability, it is better to err on the side of generosity than to get too low a protein diet.

When we have decided the amount of protein we should eat, it is an easy matter to figure the amount of fats and carbohydrates we should consume. It has been found that not more than one half of the remaining calories should be furnished in the form of fat.

Because fats and carbohydrates perform the same function in the body, we might suppose that we could replace one by the other. Fats, however, are concentrated foods and very hard to digest. On the other hand, to exclude fat entirely gives bad results, for the body works better when a part of the energy is supplied in the form of fat.

Except as table salt, mineral matter is seldom eaten as a separate foodstuff.

It is more often found in combinations with other foods, as in vegetables, fruits, milk, eggs and whole grains. If these are eaten in abundance no thought need be given to mineral matter in the diet except in occasional cases.

Now that we have a general formula for an advanced ration for human beings, let us see how it works out. Suppose the man for whom the meals are planned weighs 130 lbs. He would need an amount somewhere between the products of 130×16.1 and 130×18 in calories, or somewhere between 2093 and 2340 calories per day. He is to have one-eighth of his total calories in the form of protein, and not more than one-half the remaining calories in the form of fat. Let us consult the tables from Dr. Fisher.

	Calories.	Protein.	Fat.	Carbo- hydrates.
Breakfast				
1 shredded wheat	100	13	4.5	82.5
1 slice bread	100	13	6	81.
1 serving apple sauce	100	2	5	93
1 small square of butter	100	0.5	99.5	0
1/4 cup of cream	100	5	86	9
	500	33.5	201	265.5
Dinner				
1 large serving boiled beef	100	90	10	0.
1 baked potato	100	11	1	88
1 serving spinach	50	7.5	33	9.5
2 pats of butter	200	1	199	0
2 slices bread	200	26	12	162
2 small servings rice pudding	200	16	26	158
	850	151.5	281	417.5
Supper				
3 slices bread	300	39	18	243
2 small glasses of milk	200	38	104	58
1/4 glass cream	100	5	86	9
6 prunes	200	6	0	194
	800	88	208	504
Total	2150			

We see that the food supplied would correspond closely with the amount required. The amount may be altered by simply adding or subtracting several parts of butter or slices of bread to or from each meal.

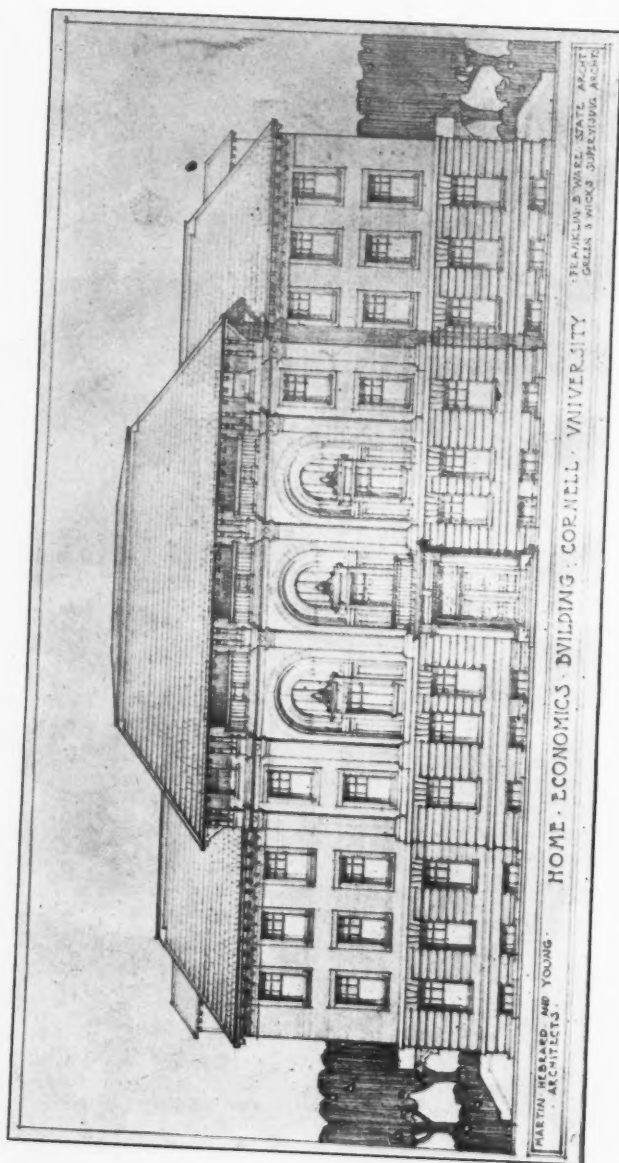
A balanced ration would not be complete without considering two other points; first, water; and secondly, bulk in the diet.

Water is an important part of every living cell, and our bodies would soon die without it. Therefore it is important to supply plenty of water to the

body in some form or other. Vegetables and fruits are among the best sources of water.

The food may supply the required number of calories, but if it does not have bulk, it will not be of as much use as bulkier food supplying less calories. Bulk is supplied by fruits, succulent vegetables and whole grains.

Although the subject of diet is a broad one, we should at least consider the proportion of protein, fats, carbohydrates, water, mineral matter, and bulk, which go to make up our meals.



MARTIN HEBRARD AND YOUNG
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HOME ECONOMICS BUILDING, CORNELL UNIVERSITY

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NOW IN THE PROCESS OF ERECTION

THE NEW AGRICULTURAL BUILDINGS

By Dudley Alleman, '14

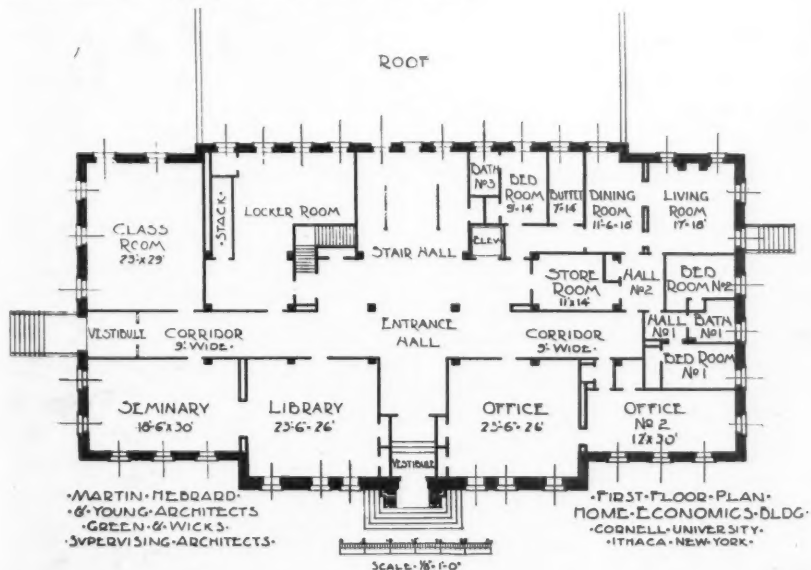
AFTER a long period of preparation and planning, the work on the new buildings of the College of Agriculture is now in full swing. Mr. A. A. Beattie, who is a graduate of the Cornell College of Architecture, is the State Superintendent of Construction, and under him the work is being rushed apace. Two large concrete mixing machines are pouring in the material which will later be the substantial foundations for as fine buildings as can be found on the campus.

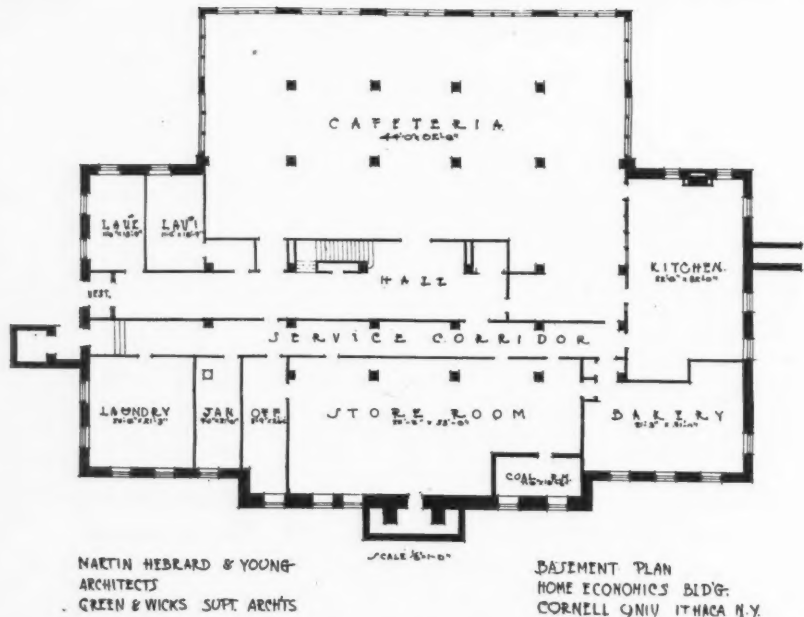
The architects for these buildings are Professors Martin, Hubbard and Young of the College of Architecture with Green & Wicks, of Buffalo, as supervising architects. All the expenses are being paid by state appropriation.

The Home Economics building, especially, is very attractive in architectural design. In front of the first floor are four large columns extending to the roof. Below are two smaller columns beside the entrance. The main part of the building is 133 feet wide by 62 feet

deep. It has a marble finish, and the exterior trim is of cut stone and brick.

The basement contains a bakery, a kitchen and a laundry. Besides these, there is a story high addition at the rear of the building, which will be a Cafeteria. The basement is equipped with electricity and gas and has concrete floors thruout. On the next floor are an apartment offices, class rooms and a library. The second floor is taken up by an auditorium and laboratories. The auditorium is 47 feet wide by 33 feet long, and has a seating capacity of about 350. This room is to have an oak floor, while the laboratories are to be covered with linoleum. The auditorium extends upward two stories, and so takes up a large part of the third floor. The rest of this floor is devoted to class rooms and to food and chemical laboratories. On the floor above are a draughting room with an oak floor, and a rest room; the remaining space is in attic.





Work is also begun on the new horse barn. This is west of the cow barn, now called the "new barn." It is about the same size as the cow barn and has somewhat the same style of construction. It consists of a main part with two wings, as the cow barn does, the main difference being that the wings flare out. This feature has met with a great deal of criticism, but it accomplishes the purpose in view; to have a court large enough for a team to turn around in, without making the main part of the barn too wide. This flaring of the wings makes the court 75 feet wide at one end and 30 feet at the other, by 110 feet long. The court opens on the Judd's Falls Road, but has a high fence in front of it to screen any unsightliness.

The wings will be devoted to stabling the horses. One wing will be devoted to the work horses. Forty single stalls will eventually be completed in this wing. The other wing will be devoted to breeding horses, and will contain twenty single stalls and ten box stalls. The single stalls will have

plank floors, while the floors of the box stalls will be of earth, the passageways being concrete. This is the ultimate plan; for the present only one-half of one wing will be completed. The size of the wings is 108 feet by 43 feet. The main barn will hold a wagon storage, offices and a training room with an earth floor. This part of the barn is 120 feet by 38 feet wide. On the second floor will be grooms' rooms and also lofts and feed bins.

The plans for the Poultry building, which is now going up between the present college buildings and the barns, will be discussed in the Poultry number for December.

In addition to these buildings, a large laboratory for the Farm Mechanics Department has been built back of the Animal Husbandry building. This consists of one large room 96 feet long by 40 feet wide. Off this room there is an office, a lavatory and a farm shop. The frame and walls of the building are made almost entirely from the material taken from the old barn.

WHAT THE FORMER STUDENTS ARE DOING

During the year 1903-4, the CORNELL COUNTRYMAN made a tabulation of the occupations of the former students of the College of Agriculture, and its results were published in the COUNTRYMAN for June, 1904. A few years later, the Secretary of the College addressed a letter to all former students asking for information concerning their occupations. The results of this subsequent tabulation, are shown below.

The tabulation is based on total replies. If all former students had been heard from, possibly the results would be slightly different; but so large a number have replied it is probable

that the results are fairly representative of the real conditions. In 1904, 899 replies were received, and in 1910, 1467 replies.

The replies in 1904 showed 91% of the former students in some form of agricultural work, 20% of whom were in agricultural education work. The replies for 1910-11 show 86% in some form of agricultural work, 11.45% of whom are in teaching and experiment station work.

It is gratifying to note that so large a percentage of the former students of the college continue in agricultural work, and especially in farm work.

Occupation.	Ph.D.	M. S. A.	Grad. students	B. S. A.	Reg. students, not graduates.	Special students.	Winter-course students.	Total replies.	Per cent of total replies.	Per cent by Groups.
Group I—Home farm	1	2	31	22	100	290	446	30.40		
Farm Manager (employed) ...		3	17	6	36	44	106	7.23		
Employed on farms in other capacities			4	4	21	90	119	8.11		
Total for Group I							671			45.74
Group II—Agricultural College teachers	13	27	9	38	4	11	5	107	7.29	
High, grammar and rural school teachers			1	9	4	9	10	33	2.25	
Experiment Station work	2	6	5	8	2	4	1	28	1.91	
Total for Group II							168			11.45
Group III—Creameries, cheese factories, milk stations, etc. .			1	2	1	8	193	205	13.97	
Conducting tests for official records						4	2	6	.41	
Total for Group III							211			14.38
Group IV—U. S. Dept. of Agr. .		9	5	16	3	3	2	38	2.59	
N. Y. State Dept. of Agr.				4		3	4	11	.75	
Total for Group IV							49			3.34
Group V—Landscape Architects.				9	1	1	2	13	.89	
Nurserymen				3	1	13	4	21	1.43	
Florists					1	6	2	9	.61	
Gardeners						5	7	12	.82	
Veterinarians			1	2	3	7	3	16	1.09	
Chemists				2		3	1	6	.42	
Total for Group V							77			5.26
Group VI—Homekeepers				2		5	16	23	1.57	
Editors	1	1	1	4		2		9	.63	
Lecturers			1				2	3	.21	
Students		1	1	4	8	13	16	43	2.93	
Total for Group VI							78			5.34

(Continued on page 62)

CROSS COUNTRY

1910 INTERCOLLEGIATE RACE

By J. L. Kraker, '12

Member of the Varsity Cross Country Team, 1910

THE request has come to me to relate the story of a Cross Country race from the viewpoint of a contestant. As an example, I shall describe a few of my sensations from the Intercollegiate race, held at Princeton in November, 1910, and in which ten colleges were represented.

The teams of seven men each, were stretched in one line across Brokaw Field, and the crowd in town for the Yale-Princeton football game, was grouped behind, and to the sides of the contestants. At the opposite end of the field, two flags, 40 feet apart marked the first turn on the course and it was for this gap that the pack hastened at the word "Go!"

Not being a sprinter and inasmuch as the first two hundred yards was run at a sprinter's pace, I was well back in the ruck when we reached the end of the field, but I realized that the race was for six miles, and so was not disheartened by a poor start.

The first mile was down hill, and so was run in fast time, but when we struck the road along Carnegie Lake, a slight upgrade was encountered. This slowed down the bunch slightly, and during the second mile I had no difficulty in working my way up to the group of leaders.

At the three mile post, however, my legs seemed to lose their spring, and a slight cramp caught my left calf. This made me drop back slightly, and a Princeton man who was trailing the leaders noticed my slackening, and tried to pass me. Thus aroused, I found to my surprise, that I had no trouble in holding off my challenger, and instead of being passed, worked back into the leading pack with my second wind working finely and my legs plodding methodically along, but with a certain spring in them which kept me near the leaders.

About this time, those men who had started out too fast started to drop back, and others taken with cramps, found the leaders pace too stiff, and so the leading pack was cut down to about 15 contenders, with the other runners, strung back for about one-half a mile distant.

At the beginning of the fourth mile we encountered the steepest hill on the course. Going up and at the top of this incline all of the Cornell team sprinted, as we had agreed to on the previous day while exploring the course, and we all improved our positions. It was at this point that Jones and Berna, who finished first and second respectively, started to leave the first pack, and they stayed in front to the finish. The rest of the bunch had quite a tussle for the lead, and while all of the Cornell team was not in front of all the others, still we were close enough to carry the cup to Ithaca for another year.

Cross country is essentially a sport for the Agricultural student. It deals with the open country and requires these same qualities for success which go to make up the successful farmer, namely: head work, a certain amount of plodding, and a lot of stamina and pluck. Any man can succeed at the game if he'll work faithfully, and it is up to all agricultural students to get out and train for the Intercollege race and get back the cup, which Sibley won last year. Run with the bunch and in all the practices remember that old saying—"The other fellow is as tired as I am."

Therefore, turn out, students of Agriculture, and support this year's college cross country team and we'll start now to show Cornell that the Ag College is to the University as Cornell is to the Intercollegiate world—supreme in cross country.

AG'S PROSPECTS IN THE INTERCOLLEGE

By W. D. Hazelton, '12

Member of the Varsity Track Team

NOW that the cross country season is here again and the interest in the sport is aroused, we naturally think of the Inter-college race. We wonder what the chances are for a victory for Agriculture, and naturally turn to the past as an indication of what the future will bring. Judging from the outcome of the Intercollege race for the past two years, we can confidently say that Agriculture will make a good showing. Aside from what the last two years have taught us, there are many advantages that we have over our rivals for the Ehrich Cup. The everyday life of a student taking Agriculture is better adapted to the developing of a cross country man than the routine of most of the other colleges. Take the course in Farm Management for example. A month or so of the excursions with that class, and a man will be a first-class cross country man. The walks to Varna and other adjacent (?) towns are at least conducive to the development of endurance. The surest way to develop a winning team would be to make Farm Management a prerequisite to the cross country course. But upon looking up the records of the cross country team for the past two years we find they are encouraging at least. Two years ago the team won first place in fine style. Of the five men that scored at that time, two have since made good on the varsity and helped Cornell with the big Intercollegiate race at Princeton last year, and will no doubt repeat their success of last year again this fall. Of the seven that scored for the college of Agriculture last year, all are still eligible for this year's team, except for the fact that there are several of them that are very likely to make good on the varsity squad. There is going to be plenty of room for new material, as the fact that a man has been on last year's team does not necessarily give him a place on this year's team. There is no limit to the number of men that can start in the

race, and every year several places are taken by men who were surprised to find it in them to make good. A new man should not be discouraged at the beginning of the season if he finds himself unable to keep up with the rest of the bunch. Give yourself a chance and you will surprise yourself. If you do not make good this year, do not give up, but be "on the job" at the very beginning of next season, and redouble your efforts. Unlike a poet, a cross country man is made, not born. So get out with the squad and help Agriculture win the Ehrich Cup. The other colleges are expecting it of us, so don't let us disappoint them. Remember the slogan "Everybody out for Agriculture", and we will get the cross country banner and the Intercollege Championship banner as well.

TRAINING

By S. H. Stevenson, '12

Member of the Varsity Cross Country Team, 1910

In order to run Cross Country, one must have plenty of strength and endurance. As most of Cornell long-distance runners never took part in athletics before they came here, they developed these qualities by training. Thus, training is the essential thing for the athlete. The beginner should start easy at first, not running too far or too hard. He should avoid running long distances on the toes, but rather land on the ball of the foot, often letting the heel touch the ground. Do not run the same distance every day but alternate between short and long distance running, the shorter distances being speedy, while the longer ones are slower and develop more endurance.

Long easy walks should be taken at least once a week.

Sleep is one of the important factors when training and regular hours should always be observed.

In regard to eating, take only those foods which seem to agree with you, and never eat hurriedly. Such things as fried or greasy foods, fresh biscuits, pie, heavy desserts and candy or other sweets should be tabooed. Further details can be gained from "Hints on Training" by "Coach" Moakley.

The Cornell Countryman

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NOVEMBER, 1911

Association Elections

With the unprecedented growth of the student body of our College during the past few years, it seems inevitable that the methods of some of our student organizations should need remodeling to make them capable of the best service, under present conditions. In the earlier years of the College, student interests were less varied, and smaller numbers made for unity of organization. The Agricultural Association was the logical meeting place for the members of a student body of not more than two or three hundred, and its discussions and elections were probably in fair degree representative.

With the new conditions, the Association touches the lives of the students much less closely than in former years. Our increased registration brings student problems of increasing difficulty, which necessitate larger and better service from the student organizations,

and we should all do our part in helping to make the association as efficient as possible.

The feature of the Association, which, as now conducted seems to need most immediate change, is the semi-annual election. At present the elections held at regular association meetings, are not attended by more than fifty to seventy-five students out of a total of about seven hundred. It seems impossible to get a real expression from the student body by these methods. Men will not turn out in large numbers to these evening meetings on the hill and the election is left in the hands of a very small number of men. To make the elections more representative, a complete change of method would seem, perhaps, to be advantageous. By means such as are used by the College of Law, and in class elections, more publicity could be given the candidates, and a more representative vote secured. The systems referred to include nominations by petition, and election by ballot, at some polling place open during specified hours of an appointed day.

At the last meeting of the Association, this matter was discussed, and a committee appointed, which is to report at the next regular meeting with some definite recommendation. It is sincerely hoped that all who have the welfare of the Association at heart will give this matter careful thought, and keep in touch with the Association meetings at which it is discussed.

Ag Musical Clubs

Starting with a few members not many years ago, the Glee and Mandolin Clubs of this College, which together form the Ag Musical Clubs,

have now come to be a vital factor in the activities of the College, and deserve the hearty interest and support of all the students. Special efforts are being made to make this a most successful year for the Clubs, and toward this end G. W. Peck, '12, a member of the Varsity Glee Club, has been secured as director of the Glee Club; and F. A. C. Smith, '12, a member of the Varsity Mandolin Club, as director of the Mandolin Club. Any man in the College who is musically inclined should consult with one of the directors of the respective Clubs in regard to joining them now, as there is still room in both clubs for a few good men. Besides the social advantages, training is given which often enables a man to make the Varsity Club another year.

The Ag Tax

Every student in the College of Agriculture is a member of the Ag Association which is the student organization formed to regulate and govern their affairs and activities in the College. It is necessary for the best development of these activities that they should have financial support. Good coaches are necessary; we should have good music at the assemblies; athletic equipment is essential if we are to win again the athletic series. The money raised to finance these activities takes the form of annual dues of one dollar to the Association. Every member of the Association is expected to pay this Ag tax, which is the only support asked during the year. The members of the Tax committee are sacrificing their time to assist in this cause. It is our duty as Ag students to pay them when first approached and

thereby make their work as light as possible.

The Announcer

We are indeed glad to announce a new publication in the Ag College, which supplies a long felt need.

This paper known as *The Announcer* has a purpose which is best expressed in its own words: "*The Announcer* is to be published for the purpose of acquainting the people of the State with the kinds of work that are in progress by the State College of Agriculture. It will announce the investigation, the pieces of extension enterprises on farms and with the people, the forthcoming bulletins, the reading-courses, the local schools, and other events and programs of which the public should have knowledge and which are not announced in the usual publications of the College.

It is specially desired to give the people the gist of the Experiment Station bulletins. Bulletins of general interest will be sent to the entire mailing-list as heretofore; but the mailing-lists are now to be classified, and bulletins on special or local subjects will be mailed regularly only to those names that are on the special lists for the given subjects. All these special bulletins will be briefly reviewed or summarized in advance in *The Announcer*; and any person not on the special list who wishes to secure a copy of the bulletin may secure it by writing for it. It is probable that the abstracts or conclusions published in *The Announcer* will give sufficient information on the results of the experiments to meet the needs of the greater number of readers.

The Trustees' Committee

On Saturday, October 21st, Dean Bailey appeared before the full board of trustees of the University and outlined plans which he thought would benefit the College of Agriculture. As a result of the discussion, Ex-President White offered the following resolutions which were adopted:

"In accordance with the request of a committee of Alumni of the State College of Agriculture, Director Bailey having been invited by this Board to appear before it and make suggestions with reference to the organization and administration of the State College of Agriculture, and he having come before the Board and made such suggestions, most of which met the approval of the Board; and Director Bailey having been urgently requested to withdraw his resignation and to which request he still declined to accede,

"*Resolved*, That a committee of six be appointed by the chair to consider in conference with Director Bailey, and so far as possible formulate into a working plan his recommendations; that said committee be directed, in behalf of this entire Board to urge upon him the desirability of his remaining so as to coöperate in carrying into practical operation such new methods of management and administration as may be adopted.

"*Resolved*, That said committee report at the next meeting of this Board."

The chair appointed as such committee, Trustees White, Wilson, Carlisle, Sackett, Mason, and Hiscock.

The Alumni are greatly interested in this action by the Trustees, as they earnestly desire to see such adjust-

ments made as will result in the most effective administration of the College.

County Organizations

The Students' Association is actively encouraging the organization of the former students of the College into county branches or chapters. The first local organization to be established was the Long Island Branch, formed last winter. As we go to press, Monroe County is just completing its organization, and three other counties are taking the initial steps. Several counties in addition have the question under consideration.

It is hoped that a considerable number of counties will have their organizations perfected before the next annual meeting of the Students' Association in Farmers' Week so that they can begin their work this winter. County lists will be furnished on application to the Secretary at the College.

Such county branches will serve to hold the Cornell men in a given section together so that they may be mutually helpful. They will afford a means for the College to deal directly with a considerable number of former students. Such branches as desire can invite the travelling extension schools from the College to be held in their locality. Farm demonstration work, coöperative experiments, rural improvements, reading-courses, and any number of other lines of work may be taken up in coöperation with the College, not to speak of the items of special local interest that will grow out of the association of such a body of men and women. The COUNTRYMAN bespeaks a hearty response to this splendid movement.

FORMER STUDENT NOTES



VAUGHN MAC CAUGHEY.

'08, B.S.A.—Vaughan Mac Caughey was born at Huron, South Dakota, but received his early education at Greenville, Ohio, graduating from the high school there in 1904. Funds for his college course were obtained by giving local lectures on biological subjects. In June of the same year he attended the summer session at Cornell, and entered the agricultural college in the fall. He was student assistant in entomology for three years and president of the *Jugatae* in his senior year. While in college, he was also lecturer in farm extension work and teachers' institute work, and instructor in nature-study at the Chautauqua summer session in 1906-7.

In February, 1908, he went to Hawaii as head of the department of natural sciences in the Territorial Normal and Training School, Honolulu, and was later made vice-principal of the school. Mr. Mac Caughey is a member of many scientific and other clubs or associations and an officer in several of them.

On Thanksgiving day, 1909, he married Miss Janet H. Brooker, (Syracuse and Columbia Universities) of Newburgh, N. Y. Since February, 1910, he has been assistant professor of Botany and Horticulture and in charge of this department as well as the extension work at the College of Hawaii. He was also visiting professor in charge of nature-study at the University of California, summer session in 1911.

'09, A.B. and Sp. Ag.—Miss Sarah M. Bailey, daughter of Dean Bailey, was married on Monday, Oct. 16th, to Mr. Horace P. Sailor of Detroit, at Dean Bailey's residence on Sage Place. Mr. Sailor is a graduate of the College of Mechanical Engineering, class of '06.

'11, B.S.A.—Lewis H. Schwartz has been appointed an Instructor in Poultry Husbandry at the University of Wisconsin, Madison, Wis. and will be general assistant in that department.

'05, B.S.A.—G. Wendell Bush was married on Wednesday, Aug. 23d, to Miss Meta Elizabeth Smith, daughter of Mr. and Mrs. Irving D. Smith, at Oseo Lodge, Monroe, N. Y.

'05, W. P.—Osborne E. Britten is at present part owner and manager of the Britten-Ellis Poultry Co., Manlius, N. Y. The firm handles incubators and brooders and other poultry supplies, sells baby chicks and raises considerable poultry.

'06, W. P.—A. Campbell Herrick now has charge of the poultry on the Riverview Dairy and Poultry Farm, at Ossining, N. Y.

'07, Sp.—Alva C. Spencer was married on Wednesday, Sept. 20th, to Miss Edith McLennan, daughter of Dr. and Mrs. Roderick C. McLennan, at Fayetteville, N. Y.

'09, B.S.A.—E. L. D. Seymour, editor of the *COUNTRYMAN* in '08-'09, has recently been made manager of the Land Department of the *Worlds Work*, published by Doubleday, Page & Co., Garden City, Long Island, N. Y. The

object of this new department is to help the right persons to get on the right land. This will be done by articles from successful farmers and descriptions of farms, reclamation projects, etc. The department also wishes to be more or less a clearing house on agricultural questions.

'09, A.B.—H. M. Fitzpatrick is now an instructor in Plant Pathology. The State Legislature has appropriated \$1,000 for further investigation of gladiolus diseases and this work is to be continued under the direction of Mr. Fitzpatrick.

'10, B.S.A.—Ralph R. Root is taking work in the Harvard School of Landscape Architecture again this year.

'10, B.S.A.—Miss Elizabeth Leonard is at present at Kingston, Mass. She is spending about four days out of the week doing work in connection with city planning, with Mr. John Nolen of Cambridge, Mass. The remainder of the week is spent in design work for Miss Holmes' nursery at Kingston, making herbaceous perennial flower gardens a specialty. Miss Leonard has done considerable garden designing abroad in the employ of Miss L. Dunnington of London, England.

'11, Ph.D.—Errett Wallace has been employed by the U. S. Department of Agriculture to carry on special investigations with fungicides and in determining the injuries resulting from their use.

'11, B.S.A.—Lindsley H. Evans is assisting Mr. Wallace in his investigations.

'11, W. P.—Mr. B. F. Brocksapp has had charge of the incubator work on a large poultry farm owned by W. J. Conners, Angola, N. Y., during the past season. His address is Angola, N. Y.; care Mr. Herman Jelfield.

'11, W. P.—Miss Clara M. Chase is teaching this year in the high school at Albion, N. Y. She raised about 1000 chickens this last season and plans to give part of her attention to poultry, along with her teaching.

'11, W. P.—Mrs. Jeannette O. Prescott is running a rural poultry farm at

Springville, N. Y. She has been very successful during the past season.

'11, W. P.—J. S. Wright has purchased a place at Barnard, N. Y., and has been successfully raising poultry this summer. Mr. Wright is chairman of the committee on organization of the Winter Course Poultry Association.

'11, Sp.—James G. Cochrane is now running the home farm at Ripley, N. Y. The farm is located in the Chautauqua grape belt and grapes are the main crop.

'11, B. S. A.—C. F. Ribsam, who was business manager of the COUNTRYMAN last year, has gone into partnership with his father in the seed business. His address is 27 Wall St., Trenton, N. J.

'11, B. S. A.—Wayne H. Rothenberger is teaching this year in the Perkiomen Seminary, Pennsburg, Pa.

'11, B.S.A.—Harry Sonnenfeld spent the summer in traveling thru Europe. He returned here soon after the opening of college to pursue work for an M. S. A.

'11, M. S. A.—On July 5th, a daughter was born to Mr. and Mrs. L. B. Cook. Mrs. Cook (nee Miss Ora Smith) took a winter course in Home Economics in '08-'09.

'11, B. S. A.—George B. Birkhahn has charge of the bottling department on a certified milk and stock farm at Morristown, N. J.

'11, B.S.A.—Thomas Bradlee is in charge of the agricultural work at Smith's Agricultural School, Northampton, Mass.

'11, Sp.—Samuel P. Coker is at present located at his home at Society Hill, S. C. He is doing plant breeding work for the Coker Seed Co.

'11, B. S. A.—David Fink has been appointed assistant in the Department of Economic Entomology.

'11, B. S. A.—Miss Elizabeth F. Genung is teaching agriculture in the high school at Tully, N. Y.

'11, B.S.A.—Arthur K. Getman is teaching agriculture at Cortland Normal School.

'11, B.S.A.—Miss Anna E. Jenkins is an Assistant in the department of Plant Pathology.

'11, B.S.A.—Stanley G. Judd, last year's editor of the COUNTRYMAN, has charge of the dairy on a large dairy farm at Marion, N. Y.

'11, B.S.A.—Byron B. Robb is assisting in the department of Farm Mechanics again this year.

'11, B.S.A.—Joseph Rosenbaum is an assistant in Plant Pathology, and taking work for an advanced degree.

'11, B.S.A.—Warren C. Funk and Harold N. Humphrey are employed as

scientific assistants in farm management in the U. S. Department of Agriculture.

'11, B.S.A.—Horace M. Pickerill is an assistant in the Dairy Department.

'11, B.S.A.—Arthur L. Thompson is assisting in the Department of Farm Management again this year.

'11, W. P.—Verne Dymond is in partnership with A. J. Tanner at Oakfield, N. Y., where a good sized poultry plant is being developed. Mr. Tanner is interested in several canning factories and part of the waste products from these is being utilized for poultry feed.



WILLIAM ORR LIDGATE, '13

William Orr Lidgate, a junior in the College of Agriculture, died quite suddenly on the evening of October 9th, at the Cornell Infirmary. The cause of his death was acute Bright's disease, and hypostatic pneumonia,

developing after an operation for appendicitis.

Mr. and Mrs. Lidgate, the parents of the student, who reside in Hawaii, were fortunately visiting in Peterborough, Canada, at the time, and were able to be with their only child for two or three days preceding his death.

Short services were held at the Chi Phi fraternity on the 10th, and the body was then taken to the home of relatives at Peterborough, Canada, for burial.

Lidgate was twenty-one years old, was born in Hawaii, and graduated with first honors from Oahu College, Honolulu. He entered Cornell soon afterward, and was here a member of Chi Phi fraternity, assistant manager of baseball, and had a good record as a student.

He will always be remembered as one who delighted to aid a friend behind his back, as one who performed any act, whether it was a regular duty or some special favor, quietly and well, and then kept the deed unknown. Prosperity could not change his attitude toward men; the service of his fellows was his aim. His many friends here in the College extend their sincere sympathy to the bereaved parents.



CAMPUS NOTES

CALENDAR

- Nov. 6 Regular meeting of the Lazy Club.
Regular meeting of the Round-Up Club.
- Nov. 10 Regular meeting of the Poultry Association.
- Nov. 13 Regular meeting of the Lazy Club.
Regular meeting of the Round-Up Club.
- Nov. 14 Frigga Fylge meeting.
- Nov. 20 Regular meeting of the Lazy Club.
Regular meeting of the Round-Up Club.
- Nov. 21 Regular meeting of the Agricultural Association.
- Nov. 25 Intercollege Cross Country Race.
- Nov. 27 Regular meeting of the Lazy Club.
Regular meeting of the Round-Up Club.

* * *

The first assembly of the year on Thursday, October 5, brought out a crowd which filled the auditorium to overflowing. The musical program consisted of a solo by Miss Clara W. Browning, '12, and another by G. W. Peck, '12. Dean Bailey then delivered an inspiring address, a welcome to the new students and a greeting to the old. In the course of his remarks he said that the man who plans to be a farmer must be suited to the work. If a man's liking is for some other em-

ployment he should not follow farming as an occupation.

* * *

The "Get Wise" meeting for freshmen was held in the Auditorium on Oct. 2d. H. B. Knapp presided, introducing as the first speaker, Secretary A. R. Mann. Subsequent talks followed on Frigga Fylge, Miss A. E. Hunn, '12; The Honor System, David Elder, '12; Departmental Clubs, F. E. Rogers, Sp.; Musical Clubs, E. V. Hardenburg, '12; Cornell Countryman, A. H. White, '12, and G. M. Butler, '12; Athletics, W. R. Wilson, '12; Cross Country, S. H. Stevenson, '12; Soccer H. B. Rogers, '12; Student Conduct, W. H. Hook, '12.

After the meeting the freshmen organized their class and elected as president, pro tem, H. M. Stanley.

* * *

The outlook for soccer this year is fairly bright. Altho many of the men on last year's team were lost by graduation, a number of good players have come to light among the large squad of candidates for the team. A very stiff fight is anticipated but it is hoped that the Agricultural team may again be able to capture the championship.

The scores to date are as follows:

- Oct. 12—Ag. 1, M. E. 1.
Oct. 16—Ag. 0, M. E. 1.
Oct. 17—Ag. 2, Architecture 0.
Oct. 19—Ag. 3, Vet. 0.
Oct. 26—Ag. 2, Law 0.
Oct. 27—Ag. 0, C. E. 0.
Oct. 31—Ag. 1, Arts 0.

The Cornell Countryman

Dr. Gilbert attended a conference recently in Buffalo with Mr. Geo. H. Stevenson, secretary and general manager of the National Corn Exposition. At this meeting plans were discussed for the next exposition which will be held in Columbia, South Carolina in February, 1913. Professor Gilbert is vice-president of the exposition for New York State. Prof. Gilbert has also been elected chairman of the Score Card Committee of the National Corn Exposition.

* * *

Announcement has been received from the New York State Fruit Growers' Association of a speaking contest under its auspices at the winter meeting of the association to be held at Rochester during the first week in January. The contest is open to any Cornell student of the Department of Pomology, from whom five will be picked to speak at the meeting. Prizes amounting to \$50 will be awarded; the subject shall pertain to Pomology.

* * *

Total registration in the College of Agriculture to date shows 916 names, an increase of 225 over the number registered at the corresponding period last fall. Of these, 405 are new students, as against 309 last year, and 511 old students as against 361 last year. It is going to be a problem this winter, what to do with the short-course men, and probably it will be necessary to limit the admission of such students to residents of New York State.

* * *

The Synopsis Club consisting of the graduate students and staff of the department of Plant Breeding, held its first meeting of the year at the home of Doctor and Mrs. Webber on Wednesday evening, Oct. 4th. A "who's who" programme was enjoyed in which each of the 25 graduate students presented a brief outline of his record up to the present. Many colleges here and abroad were represented.

* * *

The Department of Home Economics will have additional extension work

this year. A bulletin upon some farm home subject will be published each month. Mrs. Ida Harrington has been secured as an instructor and assistant in Home Economics Extension. The next bulletin will be on The Care and Feeding of Children, Part II.

* * *

The Department of Farm Management has just completed the necessary field work for an agricultural survey of Jefferson County. Over 800 different farmers have been interviewed in the course of the work. The field work was done by A. F. Barss, C. E. Ladd, E. A. Pearson, A. L. Thompson, C. G. Wooster, and E. P. Smith.

* * *

On October 5th, after the assembly the three upper classes met and elected the following to the Honor System Committee: from the class of 1912, O. W. Smith, Miss Clara Browning, A. M. Goodman; from the class of 1913, C. W. Whitney, E. S. Bates; from the class of 1914, L. J. Benson.

* * *

Prof. Wing has just returned from an extended trip in Europe. We feel sure that he will have much to tell of how our neighbors across the water care for their stock. Prof. Wing left on Aug. 16th and spent most of his time in France and the Channel Islands.

* * *

The Department of Animal Husbandry was well represented at the State Fair at Syracuse. There were exhibits of cattle, typical of the improved dairy herd and a special exhibit showing the profits to be derived from hot-house lambs.

* * *

There is an unusually large registration in the Animal Husbandry Department—165 students having already registered in Course 1 alone. There are also some five or six graduate students registered in the Department.

* * *

Prof. Harper has just published his new book, "A Manual of Horse Train-

i

ng," which promises to be well received by teachers of Animal Husbandry. The book contains some 500 pages and is well illustrated.

* * *

C. P. Smith has been appointed assistant in the Plant Pathology Department. He comes from a Field Laboratory at Youngstown, where experiments on peaches and plums are being carried on.

* * *

At a meeting of those interested in the Agricultural Cross Country team, held on October 10th, W. R. Wilson, '12, was unanimously elected captain and O. B. Kent, '12, manager for the coming season.

* * *

On Thursday, October 5, the Department of Home Economics was at home to all women students in the college in order to establish an acquaintance early in the year.

H. B. Knapp, '12, President of the Agricultural Association, addressed a farmers' meeting at North Rose on "Apple Production." The meeting was arranged by Rev. Mr. Langford of the Presbyterian Church.

* * *

Two student laboratory assistants have been added to the Home Economics Department: Miss Clara Browning, '12, and Miss Bertha Betts, a graduate of Pratt Institute, 1911.

* * *

Professor Fippin of the Soils Department, addressed a farmer's field meeting on October 1st at Marathon.

* * *

Professor Cavanaugh spoke before the West Henrietta grange on Soil Fertility.

* * *

C. P. Alexander, '13, has been appointed assistant in Biology.



AG BASEBALL TEAM.

Top row, left to right—W. Turnbull, T. C. Murray, E. C. Auchter, T. J. Whitney, F. E. Rogers, L. C. Pritchard.
Bottom row, left to right—H. H. Knight, W. R. Wilson, D. D. Ward, E. A. Brown.

GENERAL AGRICULTURAL NEWS

The third annual Conservation Congress was held this year at Kansas City, Sept. 25-27. Experts from many of our agricultural colleges and experimental stations were in attendance. Among the speakers at this Congress were President Taft, Dr. H. W. Wiley, Mr. Wm. J. Bryan, and Judge Lindsey.

The points especially emphasized were, first, the need of more scientific management of our soil to check depletion, and second, the importance of developing better rural social conditions. For years our virgin soil has been wastefully used and only recently has the nation been awakened to the importance of the conservation of soil and the restoration of fertility to "robbed" lands. As to the second point, our rural life, it was the consensus of opinion that the position of the farmer's wife could and should be improved.

* * *

The American Land and Irrigation Exposition will be held in Madison Square Garden, New York, November 3 to 12. This exposition was organized on the theory that if the desired instruction is given to immigrants and the sweat shop population, they will flock to the South and West. Illustrated lectures will be given to supplement the exhibition of farm products and farms, orchards and irrigated tracts will be allotted. A large sum has been raised that New York State may also be well represented.

* * *

Complaints have been received from settlers on Reclamation projects that by reason of the misrepresentations of land agents they have been induced to purchase lands which were afterward found to be without any rights to water from the Government canals. The Secretary of the Interior today issued the following warning which, while it refers particularly to the Rio Grande Project in New Mexico and Texas, is equally applicable to other projects containing large areas of private lands:

"All persons are warned against accepting any statements concerning this project, without inquiry from the officers of the Reclamation Service. Experience has shown that some warning of this kind is necessary because misleading statements have been issued regarding the project and the conditions existing upon it. The project has many advantages and would not have been taken up and pushed unless it was considered feasible and worthy of development. These facts, however, do not warrant certain exaggerated statements which have been made."

* * *

The National Dairy Show was held in the Union Stock yards at Chicago, Oct. 26 to Nov. 4. Over 1000 head of the best milch cows were exhibited and judged by competent authorities from the agricultural colleges and experiment stations of the country. The latest inventions in dairy machinery and the finest of dairy products were seen at this show.

* * *

Visitors to the Pacific Coast in 1915 will be given an opportunity of visiting two great Panama Expositions in California, one an international World's Fair, at San Francisco, and the other a Panama-California Exposition, at San Diego. At the latter exposition irrigation, manufacturing, and display of the natural resources are to be featured.

* * *

The New York State Agricultural Law relating to the sale of insecticides and fungicides has been amended and broadened in scope. The former law provided for inspection for insect pests but the only plant disease specifically mentioned was Black Knot of plums. The present law provides for inspection for, and, if necessary, quarantine against, Black Knot of plums or "any other dangerous fungous growth."

(Continued from page 49)

Occupation.	Ph. D.	M. S. A.	Grad. students.	B. S. A.	Reg. students not graduates.	Special students.	Winter-course students.	Total replies.	Per cent of total replies.	Per cent by Groups.
Group VII—Physicians				2	5	1		8	.55	
Nurses							2	2	.14	
College teachers (subjects other than Agr.)		1	1	4	2	2		10	.68	
Clergymen				1		1		2	.13	
Missionaries				1				1	.07	
Librarians							1	1	.07	
Produce dealers							1	1	.07	
Business Managers				3	4	5		14	.95	
Foreman						1	1	2	.13	
Real estate dealers					2		2	4	.27	
Traveling salesmen				1	1	9	8	19	1.30	
Stenographers and bookkeepers						3	8	11	.75	
Carpenters						1	3	4	.27	
Engineers						2	3	5	.34	
Machinists							3	3	.21	
Draughtsmen				1			1	2	.13	
Compositors					1		1	2	.13	
Employed at iron works							1	1	.07	
Employed by lumber co.			1	2	1	4	1	9	.61	
Employed by glove co.				1			1	2	.13	
Employed by insurance co.				1	2	2	2	7	.48	
Employed by electric co.				1	1	2	1	5	.34	
Employed by paper co.				1		1	1	3	.20	
Employed in restaurant						1	1	2	.13	
Employed in candy factory							1	1	.07	
Miscellaneous	1	1	1	9	15	26	29	82	5.59	
Total for Group VII										13.81
Died					1	4	5	10	.68	.68
Total	17	47	33	183	95	319	773	1467	100.00	100

BOOK REVIEWS


MANUAL OF FARM ANIMALS, by Merritt W. Harper, Assistant Professor of Animal Husbandry, Cornell University. Published by the Macmillan Company, New York City; 532 pages; 177 illustrations; price \$2.00 net.

As a manual, this book is invaluable to the stockman; it considers common practical matters in much detail, giving advice that has been derived from actual experience. The different class of farm animals are treated as to feeding, breeding, general management and diseases. The main characteristics of the different breeds are discussed in this connection. Much help can be

derived from the numerous illustrations. No one interested in Animal Husbandry should be without this book.

LAW FOR THE AMERICAN FARMER, by John B. Green, of the New York Bar. The Rural Science Series, edited by L. H. Bailey. Published by the Macmillan Company, New York City; 368 pages, price \$1.50 net.

This book fills a very important gap in agricultural literature, being designed to point out to the farmer his rights and duties in any case where a legal controversy may develop. It is not written in technical language, but is comprehensible to any layman. Numerous cases of decisions are cited.



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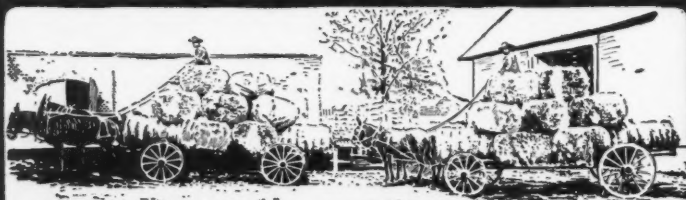
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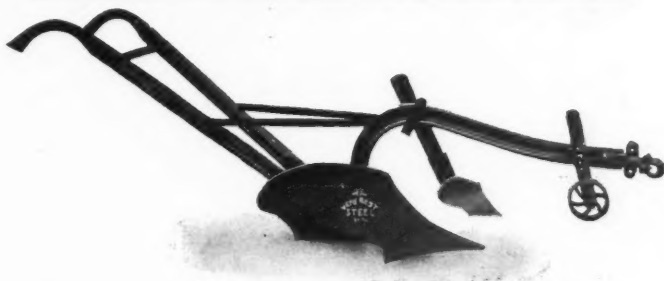
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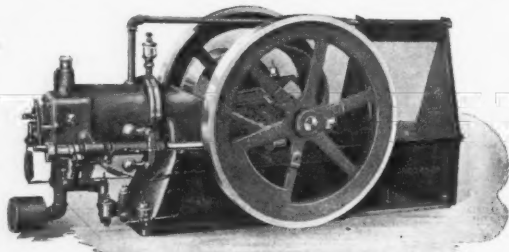
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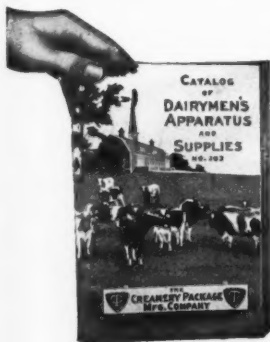
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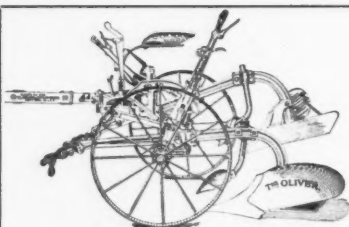
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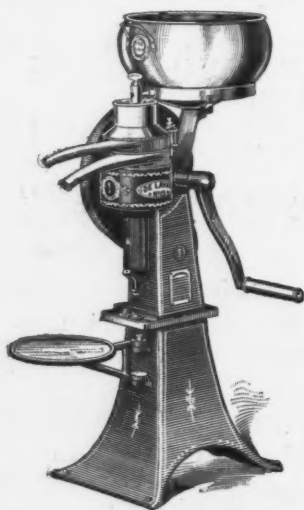
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